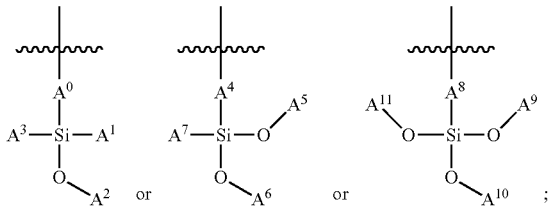
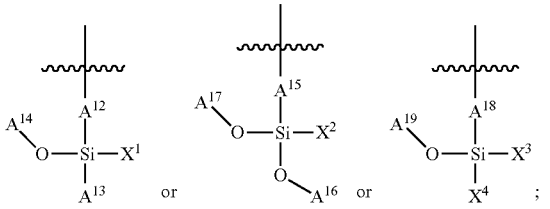
wherein:

R^S is



R^F is



A^0, A^4, A^8, A^{12}, A^{15}, A^{18}, are each independently C_nH_{2n} or C_nF_{2n};

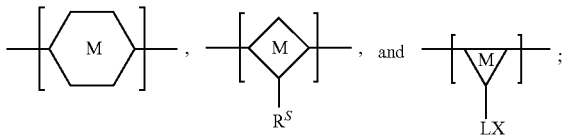
A^1, A^2, A^3, A^5, A^6, A^7, A^9, A^{10}, A^{11}, A^{13}, A^{14}, A^{16}, A^{17}, A^{19} are each independently C_mH_{2m+1} or C_mF_{2m+1};

X^1, X^2, X^3, X^4 are each independently a functional group;

n is not less than 1; and

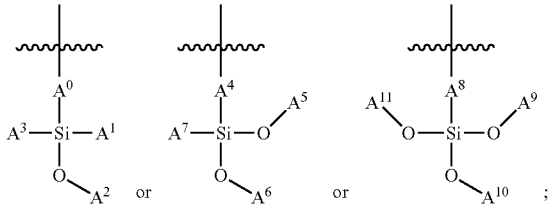
m is not less than 1.

13. The organic-inorganic interpenetrated hybrid chromophoric polymer dot of claim **11**, wherein the semiconducting chromophoric polymer comprises a plurality of units, M, selected from:



wherein:

R^S is



A^0, A^4, A^8, are each independently C_nH_{2n} or C_nF_{2n};

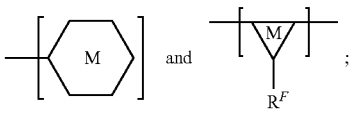
A^1, A^2, A^3, A^5, A^6, A^7, A^9, A^{10}, A^{11}, are each independently C_mH_{2m+1} or C_mF_{2m+1};

L is a linker moiety;

n is not less than 1; and

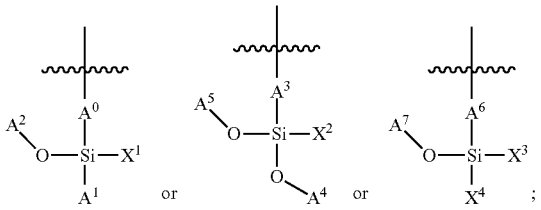
m is not less than 1.

14. The organic-inorganic interpenetrated hybrid chromophoric polymer dot of claim **11**, wherein the semiconducting chromophoric polymer comprises a plurality of units, M, selected from:



wherein:

R^F is



A^0, A^3, A^6 are each independently C_nH_{2n} or C_nF_{2n};

A^1, A^2, A^4, A^5, A^7 are each independently C_mH_{2m+1} or C_mF_{2m+1};

X^1, X^2, X^3, X^4 are each independently a functional group;

n is not less than 1; and

m is not less than 1.

15. The organic-inorganic interpenetrated hybrid chromophoric polymer dot of claim **11**, wherein the inorganic network comprises a siloxane network, an alumino-siloxane network, a titanium-siloxane network, a titanium oxide network, or a combination thereof.

16. The organic-inorganic interpenetrated hybrid chromophoric polymer dot of claim **11**, wherein the inorganic network comprises a siloxane network.

17. The organic-inorganic interpenetrated hybrid chromophoric polymer dot of claim **16**, wherein the siloxane network comprises a plurality of interconnected units, wherein the plurality of interconnected units comprises a unit selected from: